WEST BENGAL STATE UNIVERSITY
B.Sc. Honours/Programme 1st Semester Examination, 2021-22

CMSHGEC01T/CMSGCOR01T-COMPUTER SCIENCE (GE1/DSC1)

Time Allotted: 2 Hours   Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.

GROUP-A

1.   Answer any *four* questions from the following: 2×4 = 8

  (a) What is List in Python?

  (b) What is negative index in Python?

  (c) What is tuple?

  (d) What is the difference between top-down and bottom-up programming?

  (e) "Python is a high level programming language" — Justify it.

  (f) What is the difference between DRAM and SRAM?

  (g) What do you mean by Dynamic Liking?

GROUP-B

Answer any *four* questions from the following   8×4=32

2. (a) What is flowchart?   2

  (b) Differentiate between High Level, Low Level and Assembly Language.   2

  (c) What do you mean by interpreter?   2

  (d) What is system bus?   2

3. (a) What is decision table?   2

  (b) What is the purpose of a decision table?   2

  (c) Create a decision table for a login screen: 4

    (i)   The condition states that if the user provides the correct username and password the user will be redirected to the homepage.

    (ii) If any of the input is wrong, an error message will be displayed.

4. (a) Explain While loop in Python with example. 3

   (b) Explain Dictionary in Python with example. 3

   (d) What is the purpose of pass statement in Python? 2

5. (a) Write a menu-driven program, using user-defined functions to find the area of rectangle, square and circle by accepting suitable input parameters from user. 4

   (b) Write an algorithm to find the factorial of any number *n*. 4

6. (a) Write a program to check whether a number is prime or not. 4

   (b) Write a program to print the sum of the following series: 4

$$1 + \frac{1}{2} + \frac{1}{3} + \cdots\cdots + \frac{1}{n}$$

7. (a) What do you mean by built-in-functions in Python? Give examples. 3

   (b) Discuss the following list functions: 5

   (i) len()

   (ii) sum()

   (iii) any()

   (iv) all()

   (v) sorted().

8. Write short notes on any *two*: 4×2 = 8

   (a) Cache memory

   (b) Memory mapped I/O and I/O mapped I/O

   (c) Types and generations of Computers

   (d) Memory Hierarchy.

   N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within* 1 *hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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